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AMENDMENTS TO THE CLAIMS:

Claims 1-28. (Previously canceled)

Claim 29. (Currently amended) A semiconductor device comprising:

a bulk silicon region comprising single crystal silicon; and

a silicon-on-insulator (SOI) region comprising:

an insulator layer which is formed beneath an upper portion of said single crystal silicon and has at least one lateral end portion adjacent to a lower portion of said single crystal silicon; and

at least one isolation oxide formed in said upper portion of said single crystal silicon so as to form at least one island of said single crystal silicon on an upper surface of said insulator layer,

~~wherein said upper portion of said single crystal silicon and said lower portion of said single crystal silicon have a same crystal orientation, and~~

wherein said upper portion of said single crystal silicon comprises crystallized epitaxial silicon which is grown from said lower portion of said single crystal silicon such that said upper portion and said lower portion comprise a same silicon crystal, and

wherein said upper portion of said single crystal silicon is substantially devoid of a defective region

Claim 30. (Previously added) The semiconductor device according to claim 29, wherein said at least one island of single crystal silicon comprises a plurality of islands and said at least one isolation oxide comprises a plurality of isolation oxides, and each of said islands are interspaced between said isolation oxides to form a shallow trench isolation (STI) structure.

Claim 31. (Previously added) The semiconductor device according to claim 30, wherein said insulator layer has a thickness in a range of 1000Å and 5000Å.

Claim 32. (Previously added) The semiconductor device according to claim 29, wherein said upper portion of said single crystal silicon is formed over said insulator layer by

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depositing amorphous silicon on said insulator layer and said lower portion of said single crystal silicon, and crystallizing said amorphous silicon by using said lower portion of said single crystal silicon as a crystal growth seed.

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Claim 33. (Previously added)The semiconductor device according to claim 32, wherein said isolation oxides are formed in defective portions of said single crystal silicon.

Claim 34. (Previously added)The semiconductor device according to claim 31, wherein said isolation oxides and said insulator layer are formed of a same material.

Claim 35. (Previously added)The semiconductor device according to claim 29, wherein an upper surface of said isolation oxides and said single crystal silicon are planarized.

Claim 36. (Previously added)The semiconductor device according to claim 29, wherein a sidewall of said insulator layer is angled so that a width of said upper surface of said insulator layer is larger than a width of a lower surface of said insulator layer.

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Claim 37. (Previously added)The semiconductor device according to claim 29, further comprising:

- a memory device formed in said bulk silicon region; and
- a logic device formed in said SOI region.

Claim 38. (Previously added)The semiconductor device according to claim 37, wherein said memory device comprises at least one of a dynamic random access memory (DRAM) device, a memory array, a static random access memory (SRAM) device, a flash memory device, a high voltage, high power circuit, and an analog circuit.

Claim 39. (Previously added)The semiconductor device according to claim 37, wherein said logic device comprises at least one of a logic circuit, a P-FET device, an N-FET device, a low voltage, low power circuit, and a high performance digital circuit.

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Claim 40. (Previously canceled)

Claim 41. (Currently amended) A hybrid bulk silicon and silicon-on-insulator (SOI) substrate, comprising:

an insulator layer which is formed beneath an upper portion of single crystal silicon and ~~on has at least one lateral end portion adjacent~~ a lower portion of said single crystal silicon; and

a plurality of isolation oxides formed in said upper portion of said single crystal silicon so as to form at least one island of said single crystal silicon on an upper surface of said insulator layer,

~~wherein said upper portion of said single crystal silicon and said lower portion of said single crystal silicon have a same crystal orientation, and~~

wherein said upper portion of said single crystal silicon comprises crystallized epitaxial silicon which is grown from said lower portion of said single crystal silicon, such that said upper portion and said lower portion comprise a same silicon crystal, and

wherein said upper portion of said single crystal silicon over said insulator layer is substantially devoid of a defective region.

Claim 42. (Previously added) The hybrid substrate according to claim 41, wherein said insulator layer is formed only in an SOI region of said substrate and not in a bulk silicon region of said substrate.

Claim 43. (Previously added) The hybrid substrate according to claim 42, wherein said substrate is part of a semiconductor device comprising a logic device formed in said silicon-on-insulator (SOI) region.

Claim 44. (Previously added) The hybrid substrate according to claim 42, wherein said substrate is part of a semiconductor device comprising a memory device formed in said bulk silicon region.

Claim 45. (Currently amended) A semiconductor device comprising:

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a bulk semiconductor region comprising semiconductor substrate; and
a semiconductor-on-insulator region comprising:

an insulator layer which is formed beneath an upper portion of said semiconductor substrate and has at least one lateral end portion adjacent to a lower portion of said semiconductor substrate; and

at least one isolation oxide formed in said upper portion of said semiconductor substrate so as to form at least one island of said semiconductor substrate on an upper surface of said insulator layer,

~~wherein said upper portion of said semiconductor substrate and said lower portion of said semiconductor substrate have a same crystal orientation, and~~

wherein said upper portion of said semiconductor substrate comprises crystallized epitaxial silicon which is grown from said lower portion of said semiconductor substrate, such that said upper portion and said lower portion comprise a same silicon crystal, and

wherein said upper portion of said semiconductor substrate is substantially devoid of a defective region.

Claim 46. (Currently amended) A semiconductor device comprising:

a single crystal silicon substrate having a lower portion and an upper portion;
an insulator layer which is formed beneath said upper portion of said single crystal silicon substrate and on ~~has at least one lateral end portion adjacent to~~ said lower portion of said single crystal silicon substrate; and

at least one isolation oxide formed in said upper portion of said single crystal silicon substrate so as to form at least one island of said single crystal silicon substrate on an upper surface of said insulator layer,

~~wherein said upper portion of said single crystal silicon substrate and said lower portion of said single crystal silicon substrate have a same crystal orientation, and~~

wherein said upper portion of said single crystal silicon comprises crystallized epitaxial silicon which is grown from said lower portion of said single crystal silicon, such that said upper portion and said lower portion comprise a same silicon crystal, and

wherein said upper portion of said single crystal silicon is substantially devoid of a defective region..

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Claim 47. (Previously added) The semiconductor device according to claim 46, wherein said upper portion of said single crystal silicon substrate is formed on said insulator layer by growing said single crystal silicon substrate horizontally over said insulator layer.

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Claim 48. (Previously added) The semiconductor device according to claim 46, wherein said upper portion of said single crystal silicon is formed by depositing amorphous silicon on said insulator layer and said lower portion of said single crystal silicon substrate, annealing said amorphous silicon so that, using said lower portion of said single crystal silicon substrate as a crystal growth seed, said amorphous silicon is converted to single crystal silicon having a same orientation as said lower portion of said single crystal silicon substrate.

Claim 49. (Previously added) The semiconductor device according to claim 48, wherein said isolation oxides are formed by forming isolation trenches in defective portions of said upper portion of said single crystal silicon, and depositing oxide in said isolation trenches.

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Claim 50. (Previously added) The semiconductor device according to claim 29, wherein an angle between a bottom surface of said insulator layer and a sidewall of said insulator layer is about 103° .

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Claim 51. (Previously added) The semiconductor device according to claim 29, wherein a crystal orientation and structure of said upper portion of said single crystal silicon follows a crystal orientation and structure of said lower portion of said single crystal silicon.

Claim 52. (Previously added) The semiconductor device according to claim 29, wherein said upper portion of said single crystal silicon comprises crystallized amorphous silicon.

Claim 53. (Previously added) The semiconductor device according to claim 29, wherein said insulator layer has a width in a range of about $2\ \mu\text{m}$ to $10\ \mu\text{m}$.

Claim 54. (Previously added) The semiconductor device according to claim 29, wherein said upper portion of said single crystal silicon has a thickness in a range of about $500\ \text{\AA}$ to

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3000 Å.

Please add the following new claims:

Claim 55. (New) The semiconductor device according to claim 30, wherein said plurality of islands of single crystal silicon are wholly formed on said insulator layer.

Claim 56. (New) The semiconductor device according to claim 29, wherein said at least one island of single silicon crystal is substantially devoid of a defective region.

Claim 57. (New) The semiconductor device according to claim 29, wherein said at least one isolation oxide comprises an isolation oxide formed near a first end portion of said insulator layer, an isolation oxide formed near a second end portion of said insulator layer, and an isolation oxide formed near a middle of said insulator layer.

isolation oxides near said
end portions extending
laterally beyond the
end portions of
said
insulator layer